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THE GENUS *DORCADOTHRIPS* (THYSANOPTERA: THRIPIDAE) IN HAWAII AND NORTH AMERICA WITH A DESCRIPTION OF A NEW SPECIES

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Abstract.—The genus *Dorcadothrips* is reviewed for Hawaii and North America. *Dorcadothrips oahuensis,* new species, on sweet basil in Hawaii is described and the males of *D. cyperaceae* (Bianchi) and *D. xanthius* (Williams) are described for the first time. A key to identify the females and males of these three species and *D. walteri* (Crawford) is provided.

The genus *Dorcadothrips* currently consists of 18 species. The type species, *D. caespitis* Priesner, was described from Egypt and Sudan, five species were described from India, six species from Indonesia, and one species each from the Philippines, New Guinea and Australia. Three species were described from Hawaii and the Western Hemisphere: *D. cyperaceae* (Bianchi) from Hawaii, *D. walteri* (Crawford) from Michigan and *D. xanthius* (Williams) from Trinidad. *Dorcadothrips* was first used in North America by Hood (1941:145) for *nevini* Hood from New York state. Stannard (1968:306) treated the species as a junior synonym of *Taeniothrips walteri* Crawford and transferred *walteri* to *Dorcadothrips.* A new species, *D. oahuensis,* found in a field of sweet basil, *Oncimum basilicum* L., on the island of Oahu in Hawaii, is here described. In my opinion the four species from Hawaii and the Western Hemisphere are adventive from India or southeast Asia (e.g., *D. walteri* occurs in at least five provinces in India according to Bhatti (1990:227)).

The males of only six of the 18 species are known (Bhatti 1978a:168, 1978b:419). The males of *D. cyperaceae, D. oahuensis* and *D. xanthius* are here described for the first time and that of *D. walteri* is redescribed. A generic redescription and descriptions and a key to the four species are presented.

Measurements of all morphological characters are in microns except for the body length which is given in millimeters. Measurements of the holotype are given first followed by those of the paratypes in parentheses except for the antennal segments. USNM is used as an acronym for the United States National Museum of Natural History, Washington D.C.

Genus *Dorcadothrips*

Type species: *Dorcadothrips caespitis* Priesner, 1932:49 by original designation and monotypy.

Female macropterous. Body generally pale yellow. Antenna 8-segmented, rather elongate, segments III–IV with trichomes. Head with 2 pairs of ocellar setae, pair 1 absent; eye without pigmented ventral facets; maxillary palp 3-segmented. Pronotal posteroangular setae well developed, 2 pairs; posteromarginal setae 2 pairs; medial

setae on metanotum posterior of anterior margin; spinula on mesothorcic furca normally developed, absent from metathoracic furca. Forewing with 2 distal setae on forevein, scale with 4–5 marginal and 1 discal setae; posterior fringe cilia wavy. Abdominal tergites lacking ctenidia; posteromarginal comb absent from tergite VIII, sensilla absent from tergite IX, tergite X without dorsal slit. Abdominal sternite II with 2 pairs of major setae, 3 pairs on posterior margin of sternites III–VII, accessory setae present or absent from sternites.

Male apterous or macropterous. A pair of stout processes on abdominal tergite IX. Abdominal sternites III–VII each with an elongate and/or several oval glandular areas.

KEY TO HAWAIIAN AND NORTH AMERICAN SPECIES

1 Abdominal sternites with accessory setae (Fig. 13) 2
Abdominal sternites without accessory setae 3

2(1) Vertex of head with 3 small, anteromedial tubercles (Fig. 1); trichomes on antennal segments III-IV not distinctly yoked at base (Fig. 3); forewing and sides of mesothorax pale yellow; abdominal sternites III–VII of male each with 5 glandular areas ..... *cyperaceae* (Bianchi)
Vertex of head without small tubercles; trichomes on antennal segment III–IV often distinctly yoked at bases; forewing shaded pale brown basally with a short, pale brown band on proximal ⅓, sides and spiracular area of mesothorax brown; abdominal sternites III–VII of male each with 3 glandular areas (Fig. 13) ..... *walteri* (Crawford)

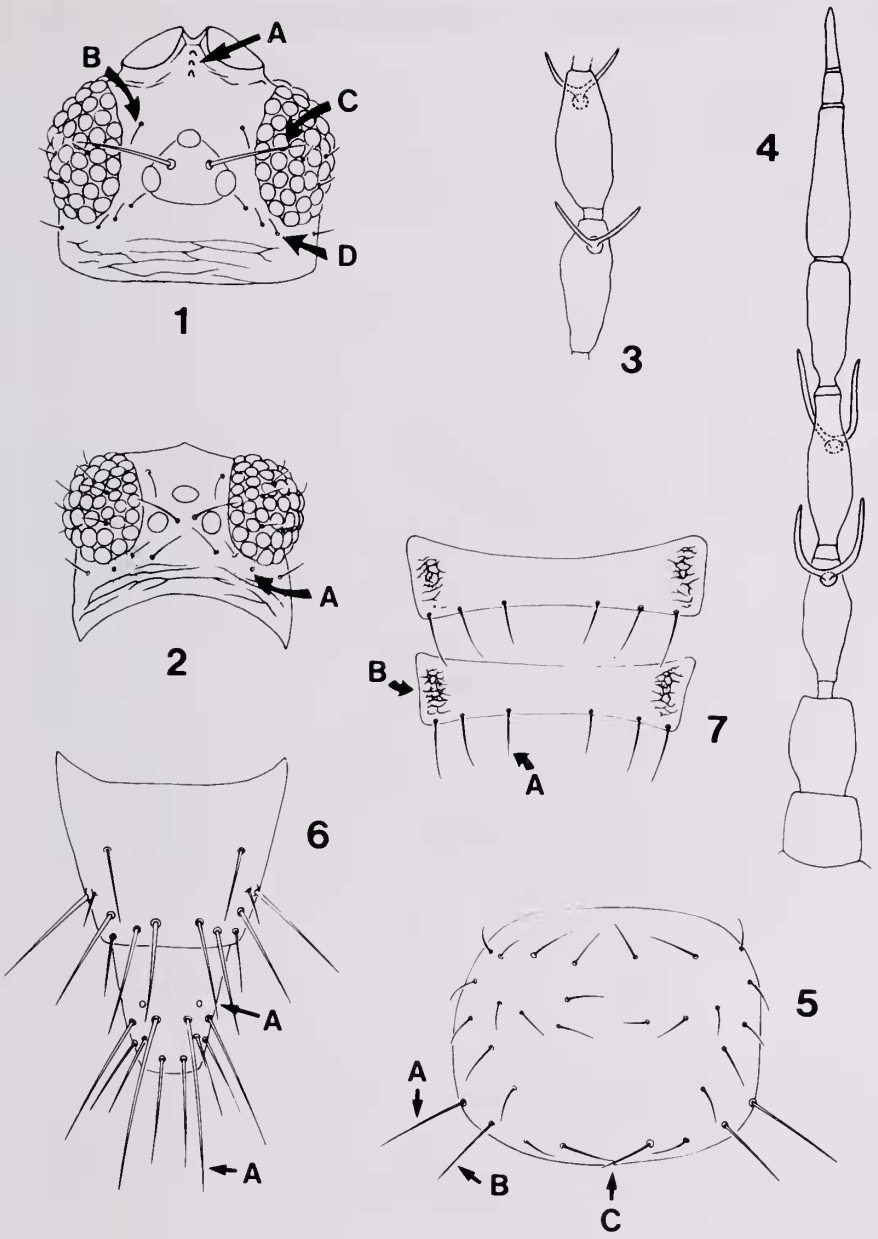
3(1) Head brown between eyes, pale posterior of eyes; abdominal sternites V–VI of female with submarginal brown area with rough callosity on each side (Fig. 7); male with 5 glandular areas on sternites II-VII, medial gland transversely elongate ..... *xanthius* (Williams)
Head pale yellow between eyes, brown posterior of eyes (Fig. 2); abdominal sternites V–VI of female pale yellow, without callosites; male with 6 glandular areas on sternites III–VII, 2 oval medial glands present (Fig. 12) ..... *oahuensis* Nakahara n. sp.

Dorcadothrips cyperaceae (Bianchi)
Figs. 1, 3, 8

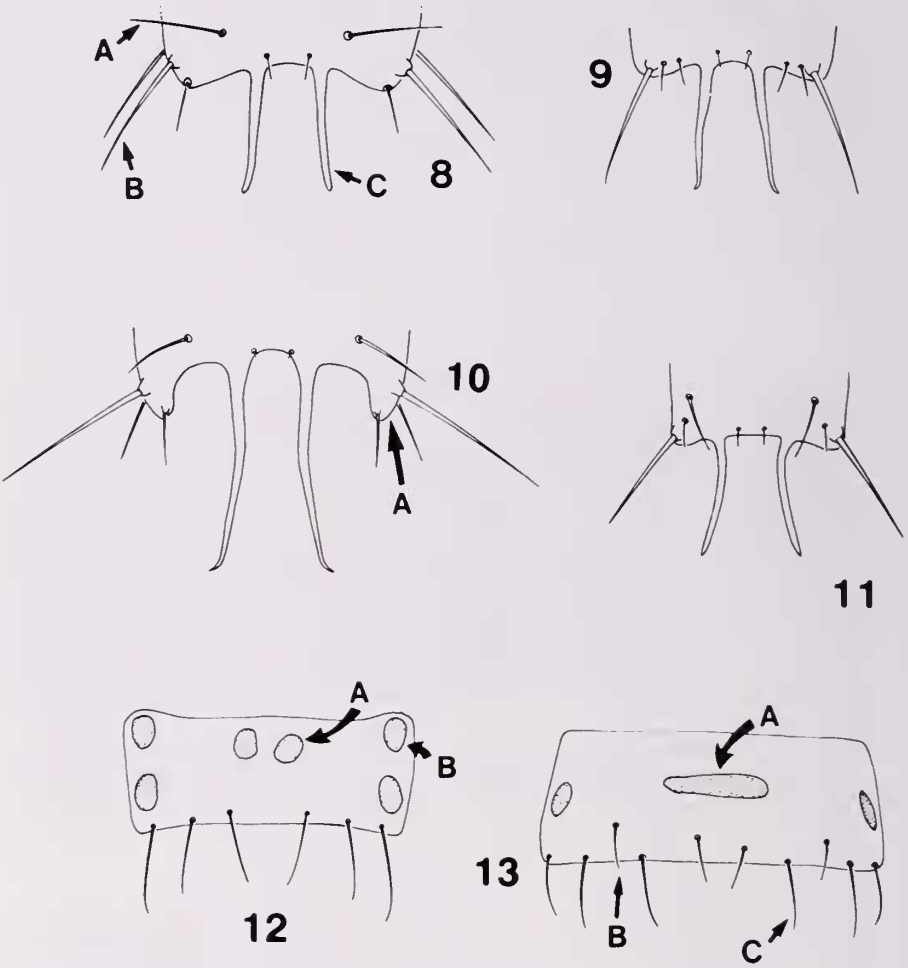
Taeniothrips cyperaceae Bianchi, 1945:283; Zimmerman, 1948:413; Jacot-Guillarmod, 1975:1001.
Dorcadothrips cyperaceae: Bhatti, 1978a:168.
Dorcadothrips caespitis Priesner: Nakahara and Hilburn, 1989:255 (misidentification).

Female (macropterous): body yellow except for pale brown transverse band along and anterior of antecostal ridge on abdominal tergites II-VIII, widened on submargins, extending onto pleurotergites; legs pale yellow; ocellar crescent red; major body setae pale yellow or light brownish yellow; forewings completely pale with slight pale grayish shade in proximal ½; antenna brown except segment I concolorous with head, basal ½ of III and bases of IV–V pale.

Body length 1.26 (1.49 distended) mm (Bianchi 1945). Antennal segments III–IV not strongly constricted distal of subapical setae, trichomes on III-IV V-shaped, 22–24 long, slightly or not yoked at bases (Fig. 3); inner sense cones on VI about 24 long, on midlength or slightly anterior, extending to base of segment VII. Head (Fig.



Figs. 1–7. 1. *Dorcadothrips cyperaceae* female. Head. A. small anteromedial tubercles; B. ocellar seta II; C. ocellar seta III; D. postocular setae. 2. *Dorcadothrips oahuensis* female. Head. A. vestigial postocular seta (POiii). 3. *Dorcadothrips cyperaceae* female. Antennal segments III and IV. 4. *Dorcadothrips oahuensis* female. Antennal segments III and IV. 5. *Dorcadothrips oahuensis* female. Pronotum. A. outer posteroangular seta; B. inner posteroangular seta; C. posteromarginal seta. 6. *Dorcadothrips oahuensis* female. Abdominal tergites IX–X. A. B1 seta. 7. *Dorcadothrips xanthius* female. Abdominal sternites V–VI. A. major seta; B. submarignal brown area with rough callosities.



Figs. 8–13. 8. *Dorcadothrips cyperaceae* male. Abdominal tergite IX. A. dorsal seta; B. posterolateral seta; C. stout process. 9. *Dorcadothrips oahuensis* male. Abdominal tergite IX. 10. *Dorcadothrips walteri* male. Abdominal tergite IX. A. posterolateral lobe. 11. *Dorcadothrips xanthius* male. Abdominal tergite IX. 12. *Dorcadothrips oahuensis* male. Abdominal sternite V. A. submedial, oval glandular area; B. submarginal oval glandular area. 13. *Dorcadothrips walteri* male. Abdominal sternite VI. A. medial elongate glandular area; B. accessory seta; C. major seta.

1) with 3 small, anteromedial tubercles on vertex; ocellar setae II anterolaterad of anterior ocellus, setae III 50–54 long, extending from anterior of posterior ocelli to middle of eyes, inside ocellar triangle; ocelli rather small, posterior ones separated by about twice diameter of anterior ocellus; postocular setae 4, POiii shortest. Pronotum weakly sculptured, with 12–15 discal setae; posteroangular setae about ⅗ as long as pronotum, outer pair 67–69 long, inner pair 67–69 long. Medial setae on

mesonotum anterior of posterior margin, aligned with submedial setae; metanotum without sensilla, medial setae posterior of anterior margin by about ⅓ length of notum. Abdominal tergite I with reduced median setae, 1 lateral seta occasionally present on one side; sculpture extending to D2 setae on tergites II-VIII; B1 setae on IX about as long as tergite X; pleurotergites without accessory setae, minute microtrichia on sculpture lines; sternite I with 3 anteromedial setae, accessory setae on II-VII, 6–11 setae on VII.

Male (apterous): body length 1.19 mm from interantennal process. Body pale yellow, abdominal tergites IX–X darker grayish yellow, processes and genitalia yellowish brown; otherwise similar to female in color and most morphological structures. Antenna 271 long, length and width ( ) of segment I 24(30), II 37(30), III 44(20), IV 47(17), V 37(17), VI 50(17), VII 12(8), VIII 20(5). Ocellar setae III about 37 long. Pronotal posteroangular setae outer pair 42–49 long, inner pair 44–47 long; posteromarginal median pair about 35 long. Abdominal tergite I with median setae well developed, about 30 long, slightly longer than ½ length of tergite, those on posterior tergites progressively shorter; D2 setae well developed as median or lateral setae on tergites II–VIII; tergites completely sculptured; tergite IX (Fig. 8) with stout processes 64 long, 5 wide at midlength, slightly curved before pointed apex; well developed dorsal setae, about 50 long; minute seta at base of each stout process; longer seta on slightly developed posterolateral lobe about 30 long; posterolateral seta 74 long, midlateral seta just anterior to posterolateral seta 67 long; sternites III–VII each with 4 accessory setae posterior of medial glandular area, sternite VIII with 7 accessory setae; medial glandular areas transversely elongate, about similar in width, 62 wide, anterior and posterior margins irregular, usually broadly narrowed; 2 oval glandular areas on each side along lateral margins.

Material examined: *Taeniothrips cyperaceae* Bianchi 2 paratypes, Honolulu, T. H., *Cyperus rotundus* L., 28-VIII-40, F. A. Bianchi. Honolulu, Hawaii, 9 females, 1 male, *Cyperus rotundus,* 11/15-XII-60, K. Sakimura; Riverside, California, 11 females, *Cyperus rotundus,* 18-X-82, D. W. Ricker & G. O. Proiner; Shelly Bay, Bermuda, 1 female, grass, 22-VI-88, D. Hilburn; Smith's, Bermuda, 1 female, *Bromus* sp., 22-VI-88, D. Hilburn (USNM).

Distribution: Bermuda, United States (California, Hawaii).

Hosts: *Bromus* sp., *Cyperus rotundus* L., grass, *Solanum nigrum* L., *Vinca minor* L.

Comments: The male of *D. cyperaceae* has not been described previously. The description presented here is based on one male collected in Honolulu, Hawaii on *Cyperus rotundus.*

This species belongs in the *D. caespitis* Priesner section of Bhatti (1978a:168) which includes three other species (*D. caespitis* Priesner from Egypt and Sudan, *D. obscuriceps* (Girault) from Australia and *D. walteri* (Crawford) from India and the United States) with accessory setae on the abdominal sternites. From *D. cyperaceae, D. caespitis* differs by having accessory setae on the abdominal pleurotergites; *D. obscuriceps* differs by having brown forewings similar to those of *D. xanthius* according to Mound and Houston (1987:6); and *D. walteri* differs by having a short, pale brown band on proximal ⅓ of the forewings, lacks small anteromedial tubercles on the vertex of the head, and in the male, abdominal sternites III–VII each with 3 glandular areas. Conversely, *D. cyperaceae* has completely pale forewings, three small anter-

omedial tubercles on the vertex of the head, accessory setae absent from the abdominal pleurotergites and in the male, abdominal sternites III–VII each with five glandular areas.

Two collections of *D. cyperaceae* on *Bromus* and unknown grass in 1988 from Bermuda were misidentified by me (Nakahara and Hilburn, 1989:255) as *D. caespitis* Priesner. In the same article, *D. caespitis* was reported from Hawaii based on misidentified material of *D. cyperaceae* in the USNM collection.

Although first found on the island of Oahu, Hawaii, this species apparently was introduced from India or southeast Asia where 12 of the 18 known species in the genus occur.

Dorcadothrips oahuensis, new species
Figs. 2, 4, 5, 6, 9, 12

Female (macropterous): body and legs pale yellow, head pale except eye light brown and light brown band extending posteriorly from each eye, reaching or not reaching posterior margin of head; ocellar crescents red; body setae pale yellow, setae on pronotum brownish yellow; forewing uniformly brown or apex paler, hindwing brown in basal ¼, with median longitudinal brown stripe. Antenna brown except almost all of segment II, basal ½ of III, basal ⅓–½ of IV and basal ⅓ of V pale yellow.

Body length measured from interantennal process, distended: 1.29 (1.18–1.37) mm.

Antenna (Fig. 4): segments III–VIII elongate; III constricted in basal ¼; IV strongly narrowed distally of subapical setae, somewhat parallel in distal ¼ of segment; VI gradually narrowed distally from base; VIII subparallel sided, about 4 times longer than wide. Trichomes on III–IV 32–35 (30–37) long, U-shaped, not yoked at base, those of III slightly longer than ½ length of segment IV; inner sense cone on VI about 54 long, extending from basal ¼ of segment to about apex of VII. Total length 300(273–305); length and width ( ) of holotype, segment I 24(27), II 37(27), III 52(17), IV 59(15), V 42(15), VI 54(15), VII 12(7), VIII 20(5); length and width ( ) of paratypes, segment I 22–24(27), II 32–35(24), III 44–57(16–17), IV 49–62(15), V 42–44(15), VI 50–54(15), VII 12(7), VIII 18–22(5).

Head (Fig. 2): wider than long, eyes bulging, occiput almost straight, part behind eye less than ½ as long as eye, with 2 complete transverse sculpture lines and several incomplete ones; small anteromedial tubercles absent from vertex; ocellar setae II anterolaterad of anterior ocellus, ocellar setae III between posterior ocelli, extending to about mesal margin of eye, closer to each other than width of anterior ocellus, 24(24–27) long; posterior ocelli separated by about width of anterior ocellus; 4 postocular setae, POiii vestigial, represented by porelike basal socket; mouthcone short, apically rounded.

Pronotum (Fig. 5): transverse, longer than head, weakly sculptured; discal setae few, about 27(25–28), longest 24(24–27); posteroangular setae ⅖ to ½ as long as pronotum, outer pair 47(42–52) long, inner pair 40–42(30–50) long; posteromarginal setae 2 pairs, inner pair longest, 27(24–32) long; basantra without setae, ferna complete; prospinasternum a transverse bandlike sclerite with posterior conical spina. Mesonotum: weakly sculptured, anteromedial sensilla absent, median setae near posterior margin, aligned with submedial setae. Metanotum: weakly sculptured, median setae slightly posterior of anterior margin, 2 sensilla close-set in about middle of notum. Spinula on mesothoracic sternum well developed.

Forewing: slightly concave on anterior margin; with 31(21–32) costal setae, 19(16–20) straight anterior fringe cilia; forevein with setae in groups of 3-2 (3–1 or 3-2) in proximal ½, 2 setae in distal ½; hindvein with 16(12–18) setae; scale with 4 marginal and 1 discal setae; forewing length 636(531–648), width at midlength 30(27–32).

Abdomen: median and D2 setae reduced on tergites I–VII; sculpture lines extending to D2 setae on tergites III–VII; tergite I with 1 pair of setae, lateral seta absent, rarely 1 on one side; tergite II with 3 lateral setae; B1 setae on tergite IX 64(44–72) long, slightly shorter than tergite X; tergite X 67(59–79) long, B1 setae 99(89–104) long (Fig. 6); pleurotergites without accessory setae, posterior margins with few small teeth; sternite I with 1–2 anteromedial setae; sternal accessory setae absent.

Male (macropterous): body length 1.21 mm from interantennal process, distended. Similar to female in color and most morphological characters.

Antenna total length 293; length and width ( ) of segment I 24(24), II 30(24), III 54(15), IV 54(15), V 40(15), VI 59(12), VII 12(7), VIII 20(5). Ocellar setae III 27 long. Pronotal posteroangular setae outer pair 44–47 long, inner pair 40–44 long; posteromarginal medial pair 30–32 long. Forewing with 29 costal setae, 17 anterior fringe cilia; 2 groups of 3–2 setae on proximal ½ of forevein, 2 setae in distal ½; hindvein with 15–17 setae; forewing length 639–642, width at midlength 27–32. Median setae on abdominal tergite I reduced; tergites I–VII sculptured between median setae; abdominal tergite IX (Fig. 9) with anterior margin not emarginate; posterior margin not lobed laterally, with stout processes 69 long, 5 wide at midlength, separated at base by about 20, slightly sigmoid, narrowed apically and slightly curved before apex; 2 minute setae between bases of stout processes, 2 short setae between each stout process and posterolateral seta on each side 20–22 long; posterolateral setae 64–72 long; dorsal setae absent. Sternites III–VII each with 2 submedial, oval glandular areas in anterior ½, 2 pairs of submarginal, longitudinally aligned glandular areas (Fig. 12).

Type material: Holotype female, allotype, 5 paratype females: Waimanalo, Hawaii, *Oncimum basilicum* L., 6-VI-91, D. Tsuda and R. Hamasaki, Holotype, allotype and 4 paratype females in USNM, 1 paratype female in Bishop Museum, Honolulu, Hawaii.

Etymology. Named after the island of Oahu in the state of Hawaii, the only known locality.

Comments: *Dorcadothrips oahuensis* belongs in the *D. hospes* section of Bhatti (1978a:168), which includes *D. xanthius* (Williams) treated here and six other species (*D. crispator* (Karny) from Indonesia, *D. hospes* (Karny) from Indonesia, *D. leptospteron* (Moulton) from New Guinea, *D. nilgiricus* Ramakrishna and Margabandhu from India, *D. scindapsi* (Priesner) from Indonesia and *D. tenerrimus* (Priesner) from Indonesia) with forewings uniformly brown, often paler apically, body either completely pale or parts brown, and abdominal sternites without accessory setae. *Dorcadothrips oahuensis* differs from its seven congeners by having rather long U-shaped trichomes on antennal segments III–IV, body pale yellow except for the brown area posterior of each eye, POiii seta vestigial and male with three pairs (one medial, two lateral) of glandular areas on abdominal sternites III–VII.

Although this species is known only from Hawaii, it is probably adventive from southeast Asia.

Dorcadothrips walteri (J. C. Crawford)
Figs. 10, 13

Taeniothrips walteri Crawford, 1941:142.
Dorcadothrips nevini Hood, 1941:145.
Dorcadothrips caespitis Priesner: Ananthakrishnan, 1965:28 (misidentification according to Bhatti, 1990:227).
Dorcadothrips walteri: Stannard, 1968:306; Jacot-Guillarmod, 1974:750; Bhatti, 1990: 227.
Dorcadothrips indicus Bhatti, 1978a:423, Bhatti, 1990:227.

Female (macropterous): body yellow except grayish brown on sides and spiracular area of mesothorax, abdominal tergites II–VIII light brown anterior of antecostal ridge and in submarginal area, pleurotergites almost completely light brown; legs pale yellow; ocellar crescent orange-red; setae light yellow; forewing shaded pale grayish brown, with a short, slightly darker grayish brown band at proximal ⅓ of wing, paler distally; antennae grayish brown except segment I pale as head, basal ½ of III and bases of IV–V pale.

Body 1.5 mm long (distended). Antennal segment IV not strongly constricted distally of subapical setae, trichomes on III–IV distinctly yoked or not yoked at base, Y- or V-shaped, 30–37 long; inner sense cone on VI anterior of midlength of segment, 24–30 long. Head with eyes bulging, occiput almost straight; small anteromedial tubercles absent from vertex; ocellar setae II anterolaterad of anterior ocellus, ocellar setae III about 54 long, aligned with anterior margin of posterior ocelli or slightly anterior, inside ocellar triangle, extending over eye; 2 postocular setae normally mesad of eye and 1 toward margin of head, or occasionally 3 mesad of eye. Pronotum with 18–22 discal setae, in anterior and medial transverse rows; posteroangular setae 60–70 long, ½–⅗ as long as pronotum; metanotum without sensilla, median setae posterior of anterior margin by about ⅕ of notum. Abdominal tergite I with well developed or reduced median setae, lateral seta absent; B1 setae on tergite IX slightly shorter than tergite X; pleurotergites without accessory setae; abdominal sternite I with 1–2 anteromedial setae; accessory setae on sternites II–VII, 2–8 on VII.

Male (apterous): body length 1 mm. Similar to female in most morphological characters, paler. Abdominal tergites completely sculptured; median setae on tergite I–VII well developed, on I 27–37 long; D2 setae on II–VIII as well developed as median and lateral setae; anterior margin of abdominal tergite IX emarginate, posterior margin strongly lobed laterally (Fig. 10), stout processes 94–110 long, broadly but slightly curved laterally, ending apically with sharper curve; dorsal setae well developed, 42–54 long; minute seta at base of each stout process; posterolateral setae 74–86 long on lateral margin of posterolateral lobe, a shorter setae 27–37 long on inner margin of lobe near apex; abdominal sternites III–VII (Fig. 13) with 1 transversely elongate medial glandular area, 1 oval glandular on each side, occasionally 2 glandular areas on 1 side; 1–5 accessory setae posterior of medial glandular area, 5 accessory setae on VIII.

Material examined: *Taeniothrips walteri* Holotype, 8 paratypes, Kalamazoo, Michigan, midcrease grass blade, 6-X-40, J. E. Walter; *Dorcadothrips nevini* Hood, Holotype, allotype, 23 paratypes, Ringwood, Tompkins County, New York, grass in

bog, 4-X-40, F. R. Nevin. Kilroy State Park, Tyler, Texas, 1 female, 22-V-84, Woolley coll.; Hubli, India, 4 females, ex grass, 16-I-64, TNA No. 127 (USNM).

Distribution: India, United States (Illinois, Michigan, New York, Texas).

Hosts: *Andropogon* sp., grass.

Comments: *Dorcadothrips walteri* was described from Michigan and the junior synonym, *D. nevini,* was described from New York state. According to Bhatti (1990: 227), *D. walteri* occurs in five states in India and was previously known in India as *D. indicus* or misidentified as *D. caespitis.*

This species and *D. cyperaceae* (Bianchi) have accessory setae on the abdominal sternites and belongs in the *D. caespitis* section of Bhatti (1978a:168). The differences between these species are discussed in the comments for *D. cyperaceae.*

Dorcadothrips xanthius (Williams)
Figs. 7, 11

Physothrips xanthius Williams, 1917:59.
Taeniothrips (*Physothrips*) *xanthius*: Watson, 1924:41.
Taeniothrips xanthius: Moulton, 1933:130; Jacot-Guillarmod, 1975:1064.
Dorcadothrips xanthius: Bhatti, 1978a:168.

Female (macropterous): body generally pale yellow; head brown at eyes and between eyes to anterior margin, pale yellow posterior of eyes; abdominal sternites V–VI with submarginal brown area on each side (Fig. 7), brown area usually present on sternite IV; legs pale yellow; setae light yellow; ocellar crescent red; forewing uniformly brown, paler at apex; antenna brown except paler in basal ½ of segment II, pale in basal ½ of III, ⅓ of IV, ¼ of V and base of VI.

Antennal segment IV strongly contricted distally of subapical setae (cf. Fig. 4), III–IV with long, U-shaped trichomes not yoked at base, 32–42 long, VI with inner sense cone on about midlength, extending to segment VIII. Head lacking small anteromedial tubercles on vertex; ocellar setae II anterolaterad of anterior ocellus, ocellar setae III about 27 long, aligned with anterior margin of posterior ocelli or between posterior ocelli, closer to each other than diameter of anterior ocellus, extending to mesal margin of eyes; posterior ocelli separated by about width of anterior ocellus; 4 pairs of postocular setae, POiii shorter than POi-ii. Pronotum with 22–25 discal setae; posteroangular setae 32–44 long, ⅓ to less than ½ as long as pronotum. Metanotum with median setae near anterior margin; 2 sensilla about midlength or slightly anterior on notum. Abdominal tergites with median setae reduced; tergite I without lateral seta; sculpture lines not extending to D2 setae on III–VIII; B1 setae on tergite IX shorter than tergite X; pleurotergites without accessory setae; abdominal sternite I with 1–2 anteromedial setae; accessory setae absent from sternites; submarginal brown area with rough callosity on each side of sternites V–VI (Fig. 7).

Male (macropterous): body length 1 mm from interantennal process. Similar to female in color and most morphological structures (submarginal brown areas on abdominal sternites V–VI not observed). Antenna 266 long; length and width ( ) of segment I 22(24), II 32(27), III 42(17), IV 47(17), V 37(15), VI 54(15), VII 12(7), VIII 20(5). Ocellar setae about 24 long. Pronotal posteroangular setae 32 long, posteromarginal setae medial pair 22 long. Forewing 551 long, 35 wide at midlength; with 21 costal setae, 14 anterior fringe cilia, hindvein with 10 setae. Median setae

on abdominal tergite I reduced; tergites completely sculptured; tergite IX (Fig. 11) with straight anterior margin; stout processes 64 long, 5 wide at midlength, extending posteriorly, curved outward; dorsal setae 30 long, posterolateral setae 59–67 long, a setae between dorsal setae and posterolateral seta about 12 long. Abdominal sternites III–VIII with a median, transversely elongate glandular area and two small, oval, submarginal glandular areas on each side.

Material examined: *Physothrips xanthius* Williams 1 Co-type and 1 Paratype; Trinidad, Port-of-Spain, on orchids, 1916, F. W. Urich (C. B. Williams No. 772). Trinidad, Port-of-Spain, 1 female, 1 male, orchid, 17-IV-16, C. B. Williams; Trinidad, Port-of-Spain, 5 females, 2 males, orchids, X-15, F. W. Urich; New York, New York (New York Botanical Garden) 13 females, 1 male, 29-X and 3-XII-32, J. Saitta. (USNM). Other females examined from Australia, Belgium, England, Puerto Rico, Trinidad and the United States (California, Hawaii, Kentucky, Maryland, New York and Oregon) from various orchids grown mainly in greenhouses. These collections are 50 years or older and very likely this species may not occur in some of these localities.

Distribution: Australia, Belgium, Brazil, England, Korea, Japan, Puerto Rico, Trinidad, United States (California, Florida, Hawaii, Kentucky, Maryland, New York, Oregon).

Hosts: *Cattleya* sp., *Cypripedium* sp., *Laelia* sp., *Odontoglossum* sp., orchids.

Comments: The male of *D. xanthius* has not been described previously. The description presented here is based on a male collected in New York Botanical Garden in 1932 and three males from Trinidad collected in 1915 and 1916.

This species also belongs in the *D. hospes* section of Bhatti (1978a). It differs from *D. oahuensis,* another member of the section, by the brown submarginal area with a roughen callosity on each side of abdominal sternites V–VI in the females, and the males with a transverse, elongate medial glandular area on abdominal sternites III–VII. The female of *D. oahuensis* has completely pale sternites V–VI and lacks rough callosities and the males have two oval submedial glandular areas on sternites III–VII.

Although this species was first found in Trinidad, it is probably adventive and may have been introduced on orchids from southeast Asia where most of the species in the *D. hospes* section are known.

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